

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An electrochemical cell comprising
a device ~~A device~~ for receiving a fluid sample, which is configured so as to form an ~~electrode, in particular a counterelectrode or a working electrode, in an electrochemical cell,~~ electrode that is accessible to be electrically connected to an electrical generator, the device comprising
an end part having at least one cavity which opens to an exterior via an opening, said cavity being equipped with a base, wherein
said end part exhibits a first electrically insulating hydrophobic zone which is adjacent to the cavity opening and a second electrically conducting hydrophilic zone which is adjacent to said first electrically insulating hydrophobic zone and which at least partially covers the base of the cavity such that, when said end part is immersed in a fluid and then emerges ~~therefrom,~~ from the fluid, said cavity retains part of said fluid by means of capillary action, a cavity depth/opening diameter ratio varying in a range from 0.01 to 1.
2. (Currently Amended) The ~~device~~ electrochemical cell as claimed in claim 1, wherein the first electrically insulating hydrophobic zone is provided with a hydrophobic coating, said hydrophobic coating being ~~in particular~~ deposited on said end part, at least ~~at the~~ at a periphery of said opening.
3. (Currently Amended) The ~~device~~ electrochemical cell as claimed in claim 2, wherein the first electrically insulating hydrophobic zone extends at least one of (1) into the cavity, without completely covering the base and (2) onto an outer wall of the device.

4. (Currently Amended) The ~~device~~electrochemical cell as claimed in claim 1, wherein the second electrically conducting hydrophilic zone is made of a metallic or nonmetallic, electrically conducting material.

5. (Currently Amended) The ~~device~~electrochemical cell as claimed in claim 1, wherein

the end part comprises a body, which is at least one of made of an electrically conducting material and coated with a coating of an electrically conducting material, and the cavity ~~being~~is at least partially formed by the body.

6. (Currently Amended) The ~~device~~electrochemical cell as claimed in claim 1, wherein the cavity has at least one of the following characteristics:

- said cavity has a volume sufficient to retain a volume of fluid sample in ~~the range~~
of from a range from 0.1 picoliter to 1 μ l, and
- said cavity has a depth of 5 μ m to 200 μ m.

7. (Currently Amended) The ~~device~~electrochemical cell as claimed in claim 1, wherein said device comprises a rod equipped, on ~~the side~~a side of the end part, with a sleeve that has a protruding part which extends beyond ~~the end~~an end of the rod.

8. (Currently Amended) The ~~device~~electrochemical cell as claimed in claim 7, wherein said sleeve is made of a hydrophobic material.

9. (Currently Amended) The ~~device~~electrochemical cell as claimed in claim 7, wherein said sleeve is made ~~of a~~of an electrically conducting material, and at least ~~the end~~an end of the protruding part is coated with a layer of hydrophobic material.

10. (Currently Amended) The ~~device~~electrochemical cell as claimed in claim 1, further comprising a damping element for reducing impacts that may affect said device when

the end part of the device comes into contact ~~via its end part~~ with a depositing zone on a solid substrate.

11. (Currently Amended) The ~~device~~ electrochemical cell as claimed in claim 10, wherein said damping element is a spring.

12. (Currently Amended) The ~~device~~ electrochemical cell as claimed in claim 1, wherein said device comprises a rod.

13. (Currently Amended) The ~~device~~ electrochemical cell as claimed in claim 12, wherein said rod is made of a material capable of elastic deformation.

14. (Currently Amended) The ~~device~~ electrochemical cell as claimed in claim 13, wherein said rod comprises at least one part in a shape of ~~a S~~ an S which plays a role of a damping element.

15. (Currently Amended) The ~~device~~ electrochemical cell as claimed in claim 11, wherein

said device further comprises a rod, and

said rod slides in another part in order to ~~damp~~ dampen the contact with the solid substrate.

16. (Withdrawn-Currently Amended) A process for sampling and transporting a fluid sample using ~~a device~~ the electrochemical cell as defined in claim 1, comprising steps consisting of:

a) immersing the end part comprising said cavity in a container containing ~~a fluid~~ the fluid to be sampled, and then removing the end part from the container; and

b) bringing said end part into contact with a solid substrate.

17. (Withdrawn-Currently Amended) The process as claimed in claim 16, wherein the end part is subsequently moved away from the solid substrate, so as to leave, as a deposit on the solid substrate, a drop of the fluid sample.

18. (Withdrawn-Currently Amended) The process as claimed in claim 16, in which steps a) and b) are repeated as many times as necessary for depositing a plurality of identical or different fluid samples on the solid substrate, so as to form, on said solid substrate, deposits in the form of a matrix array.

19. (Withdrawn-Currently Amended) The process as claimed in claim 16, wherein the fluid sample contains biological molecules or substances to be deposited on the solid substrate.

20. (Withdrawn-Currently Amended) The process as claimed in claim 16, wherein said fluid sample contains an electrolyte ~~and, optionally, other compounds~~ in suspension.

21. (Withdrawn) The process as claimed in claim 20, wherein an electrochemical-type analysis of the suspension sampled is carried out.

22. (Withdrawn-Currently Amended) The process as claimed in claim 20, wherein a measurement of potential between said end part and said solid substrate, by means of the sample, is carried out.

23. (Withdrawn-Currently Amended) The process as claimed in claim 20, wherein the device comprises a body made of a conducting material, and said end part is equipped with an insulating coating, and said solid substrate is made of a conducting material, and in which, after step b), an electric current is passed between said end part and said solid substrate, by means of the fluid sample.

24. (Withdrawn-Currently Amended) The process as claimed in claim 21, wherein said fluid sample contains a monomer that is electropolymerizable by oxidation, and

an electric current is passed between ~~said body and the~~ a body of the device and the solid substrate, bringing said solid substrate to a potential required for polymer formation.

25. (Withdrawn-Currently Amended) A process for forming an electrochemical cell, the process comprising the following steps:

- providing a receiving device which comprises an end part having at least one cavity which opens ~~to the~~ to an exterior via an opening, said cavity being equipped with a base, ~~this the~~ the end part exhibiting a first electrically insulating hydrophobic zone which is adjacent to the cavity opening and a second electrically conducting hydrophilic zone which is adjacent to the first electrically insulating hydrophobic zone and which at least partially covers the base of the cavity, a cavity depth/opening diameter ratio varying in a range from 0.01 ~~to 1~~ to 1;

- providing a receiving surface having at least one conducting zone, zone;
- sampling a fluid sample by means of the receiving ~~device~~ device; and
- bringing the end part of the receiving device into contact with the at least one conducting zone of the receiving surface, the first electrically insulating hydrophobic zone being configured so as to electrically insulate the second electrically conducting hydrophilic zone from the at least one conducting zone of the receiving surface.

26. (Withdrawn-Currently Amended) A process comprising the following steps:

- providing a receiving device which comprises an end part having at least one cavity which opens ~~to the~~ an exterior via an opening, said cavity being equipped with a base, ~~this the~~ the end part exhibiting a first electrically insulating hydrophobic zone which is adjacent to the cavity opening and a second electrically conducting hydrophilic zone which is adjacent to the first electrically insulating hydrophobic zone and which at least partially

covers the base of the cavity, a cavity depth/opening diameter ratio varying in a range from 0.01 to 1,

- providing a receiving surface having at least one conducting zone,
- sampling a fluid sample by means of the receiving device,
- bringing the end part of the receiving device into contact with the at least one conducting zone of the receiving surface, the first electrically insulating hydrophobic zone being configured so as to electrically insulate the second electrically conducting hydrophilic zone from the at least one conducting zone of the receiving surface,
- establishing an electric current between the second electrically conducting hydrophilic zone of the receiving device and the at least one conducting zone of the receiving surface or measuring an electrical parameter between the second electrically conducting hydrophilic zone of the receiving device and the at least one conducting zone of the receiving surface.

27. (Withdrawn-Currently Amended) The process as claimed in claim 26, comprising the following step:

- establishing an electric current between the second electrically conducting hydrophilic zone of the receiving device and the at least one conducting zone of the receiving surface in order to polymerize a substance contained in the cavity of the receiving device.

28. (Withdrawn-Currently Amended) The process as claimed in claim 26, further comprising the following steps:

- measuring an electrical parameter between the second electrically conducting hydrophilic zone of the receiving device and the at least one conducting zone of the receiving surface; ~~surface, for example a steel sheet;~~

- repeating the preceding step in order to carry out, for the at least one conducting zone of the receiving surface, a mapping relating to a physical or chemical characteristic, for example an oxidation state, using the measurements obtained.

29. (Currently Amended) The ~~device~~ electrochemical cell as claimed in claim 4, wherein the electrically conducting material is chosen from steel, titanium, platinum, gold, silver, graphite and carbon fibers.

30. (Canceled)

31. (Currently Amended) The ~~device~~ electrochemical cell as claimed in claim 6, wherein the cavity has a volume sufficient to retain a volume of fluid sample specifically in the range from 1 to 50 nl.

32. (Currently Amended) The ~~device~~ electrochemical cell as claimed in claim 6, wherein the cavity has a circular or polygonal transverse cross section.

33. (Currently Amended) The ~~device~~ electrochemical cell as claimed in claim 6, wherein the cavity has a substantially cylindrical or conical shape, or has a cylindrical wall extended by means of a conical base.